Remarks/Arguments

Reconsideration of this Application is requested.

Claims 1-7, 9-15 and 17-24 are rejected under 35 USC §102(e) as being anticipated by Swildens et al., U.S. Patent No. 6,484,143 (referred to hereafter as Swildens).

Swildens, et al. discloses the following in column 3, lines 43-48:

> "The local DNS 113 queries the traffic management system 105 for name resolution of the customers web site and receives a response specifying the server best suited to handle the request, either customer origin servers 107 or, servers 103 located in the UDN."

Thus, Swildens balances the load by querying a traffic management system.

In Applicant's Claim 1, the load is balanced by steps c1), c2) and c3) which read as follows: c1) retrieving said location code for said requesting device; c2) accessing said table to retrieve a service provider address associated with a service provider location code closest to said retrieved location code; and c3) addressing said initiated request with said retrieved service provider address.

An advantage of Applicant's foregoing steps is that the devices of Applicant's claimed network are not burdened with the requirement for a traffic management system.

Swildens goes to a traffic management system on every request which increases his network traffic. Lines 63 of column 3 to line 1 of column 4 of Swildens reads as follows:

> "1. The client 111 requests a customer home page: www.customer.com from a local DNS 113.

> 2. The local DNS 113 queries the traffic management system 105 for name and address resolution and receives a reply 125, 127 indicating the optimal customer origin site to retrieve the homepage 131."

Applicant's step d) of claim 1 reads as follows: d) accessing by said devices a seed system to download an updated table if said devices cannot access the service provider retrieved from said table.

Thus, Applicant's claimed invention goes only to a server to download an updated table if and only if the address in the device table no longer specifies a working service provider as claimed in step d) of Applicant's claim 1.

The Examiner stated in pages 3 and 4 of the Final Rejection: "As to claims 2, 10 and 18, Swildens teaches the method, device and system of claims 1, 9 and 17 respectively wherein at least one of said network devices is a mailing device (see col. 17 lines 20-45).

Swildens reads as follows in column 17, lines 28-45:

> "In other aspects, the method includes performing tests. Here, the interface also contains a utility that allows the user to check a Web page from multiple locations. If an HTTP service is used, a quick status check can be executed as follows:
> 1) Access the user interface at: https://speedeye.spedera.com
> 2) In the text entry field, enter the URL for the page you want to check.
> 3) Select the locations from which you want to check the page.
> 4) Press the Check button. This causes servers at the location, or locations, selected to download the Web page associated with the URL you entered in Step 2.
>
> When the servers have completed downloading the page, the page-performance results are shown in the form of tables and graphs. The first table (see FIG. 6D) is the overall performance table. It appears at the top of the results. In this example, the page took an average of 500 milliseconds (half a second) to download from the

> first three locations (rows) and 1200 milliseconds (1.2 seconds) from the last location.
>
> A server name, physical location, and network location identify each location. For example, the last location in FIG. 6D is labeled as "server-4/sterling/exodus." This label identifies a server on the Exodus network located in Sterling, Va., USA."

Claims 2, 10 and 18, respectively, claim the network device being a mailing machine, a mailing device, and a mailing device.

Applicant's specification read as follows in lines 8-11, page 5: "In a preferred embodiment of the subject invention, network devices 10 include mailing devises, such as postage meters and rating scales, which determine postage amounts or shipping charges for mail pieces or packages to be shipped.

Thus, Swildens does not disclose network devices that are postage meters, rating scales, etc.

The Examiner stated in pages 3 and 4 of the Final Rejection the following: "As to claims 3, 11 and 19, Swildens teaches the method, device and system of claims 1, 9 and 17 respectively wherein at least an approximate distance between two geographic locations can be calculated as a function of location codes corresponding to said two locations (see col. 11 lines 30 – column 12 lines 30).

Column 11, line 30 to column 12, line 32 of Swildens reads as follows:

> "2. Procedures
> We now describe the procedures that can perform to set up the present CDN service and to monitor the performance of the Web site:
> A. Implementing the CDN;
> B. Invalidating content by controlling cache;
> C. Monitoring activity; and
> D. Performing tests.
> Details of each of these procedures are provided below.

A. Implementing the CDN

To implement the CDN, the customer only need to make minor changes to the web pages in order to direct user requests to the present Web caches instead of to the origin site. In a specific embodiment, the method is as simple as changing the pointers in the HTML. When a cache gets a request for content, it will return the requested object if it exists in the cache. If the content does not exist, it will retrieve the content from the origin site and return it to the user, as well as cache the content so that subsequent requests for that object are instantly available.

To modify the site, the customer can either: (1) changing the URL; or (2) set up virtual hosting. In a specific embodiment, the site can be modified for redirecting a user requests by changing the URL in the HTML. The following example, a request for a picture, shows the original html and the revised html.

Original homepage

The original homepage contains the following URL:

http://www.customer.com/page.html

The URL contains the following HTML:

<html><body>

Here is a picture:

<img src="images/picture.jpg">

</body></html>

Revised homepage

The "img scr" tag has been revised:

<html><body>

Here is a picture:

<img src+"http://customer.speedera.net/2www.customer.com/images/picturejpb">

</body></html>

With the original configuration, a user's browser requests the picture from the customer.com Web servers:

page.html from www.customer.com

images/picture.jpg. from www.customer.com

With the revised configuration, a user's browser requests the picture from the customer.speedera.net Web servers:

page.html from www.customer.com

www.customer.com/images/picture.jpg from customer.speedera.net

Note: If the cache does not hold the requested object in memory or on disk, it makes a request to the origin site and caches it.

> In an alternative embodiment, the method can set up virtual hosting so that the user's request for content is directed to the present CDN instead of to the origin site. Here, the customer can change the DNS setup to cause the domain name to resolve to the present network cache servers instead of to the original Web server. The domain name may be changed, for example, change the domain name from www.customer.com to wwx.customer.com. The present caches in the network can be configured in a way such that when they get a request for www.customer.com content that have not cached, they can make a request to the wwx.customer.com origin site to get the content. Here, the URLs in the Web pages may not need to be changed."

Thus, Swildens' goes to a Domain Server (DNS) and looks up www.customer.com. Then, Swildens' DNS returns the address for www.customer.com.

In Applicant's claim 3, an appropriate distance between two geographic locations is calculated as a function of location codes corresponding to the two locations. Applicant's does not utilize a Domain Server (DNS) or change any names.

Applicant's claimed invention utilizes a look up table to compare the device location code to the server location codes. The closest server is then picked. Now, Applicant attempts to communicate from the device closest to server 1. If Applicant cannot communicate with the device closest to server 1, Applicant downloads a new table from the table server and performs the above-mentioned steps again utilizing the look up table.

The Examiner stated in page 4 of the Final Rejection the following: "As to claims 4, 12 and 20, Swildens teaches the method, device and system of claims 3, 11 and 19 respectively wherein said location codes are zip codes used by a postal service (see col. 17 lines 20-45).

Swildens discloses the following in column 17, lines 20-45:

> "In other aspects, the method includes performing tests. Here, the interface also contains a utility that allows the user to check a Web page from multiple locations. If an HTTP service is used, a quick status check can be executed as follows:
> 1) Access the user interface at: https://speedeye.spedera.com
> 2) In the text entry field, enter the URL for the page you want to check.
> 3) Select the locations from which you want to check the page.
> 4) Press the Check button. This causes servers at the location, or locations, selected to download the Web page associated with the URL you entered in Step 2.
>
> When the servers have completed downloading the page, the page-performance results are shown in the form of tables and graphs. The first table (see FIG. 6D) is the overall performance table. It appears at the top of the results. In this example, the page took an average of 500 milliseconds (half a second) to download from the first three locations (rows) and 1200 milliseconds (1.2 seconds) from the last location.
>
> A server name, physical location, and network location identify each location. For example, the last location in FIG. 6D is labeled as "server-4/sterling/exodus." This label identifies a server on the Exodus network located in Sterling, Va., USA."

In Applicant's claims 4, 12, and 20, the location codes are postal zip codes, which define many different areas of cities; whereas, Swildens states in lines 44-45 of column 17 "This label identifies a server on the Exodus network located in Sterling, Va., USA." How helpful would Swildens' location code be if it stated "New York City" when there are approximately 8,000,000 people in the City? New York City has numerous zip codes.

The Examiner stated in page 4 of the Final Rejection the following: "As to claims 5, 13 and 21, Swildens teaches the method, device and system of claims 1, 9 and 17 respectively wherein a group of said service providers share a common location code

and selected ones of those of said devices which are closest to said group address said initiated request to a primary service provider in said group; said method further comprising the step of: said selected devices addressing said initiated request to an alternate service provider in said group if they cannot log on to said primary service provider (see col. 10 lines 37-65 and col. 4 lines 62-col. 5, lines 16).

Swildens discloses the following in column 10, lines 37-65:

> "Latency problems are often aggravated by packet loss. Packet loss, common on the Internet, tends to worsen at "peering points," locations where different networks connect. One way to reduce packet loss and latency is to install content servers closer to users and ensure that when a user requests data, the request is routed to the closest available server. The present network has deployed web caches, streaming, and FTP servers throughout the Internet, on many networks close to end users. In addition, the network uses a Global Traffic Manager that routes traffic to the closest, most available and least loaded server.
>
> The network often synchronizes the content on the customer's origin site with the Web cache servers on the network. When new content is placed on an origin site and when users make requests for that content, it is automatically replicated to Web cache servers in the network. When new content is published on the origin site with a new name, it is generally immediately available from all caches in the present network. For example, the network user might add an object to the site where a similar object exists:
> Add www.customer.com/images/picture2.jpg to the same site as "www.customer.com/images/picturejpg."
>
> When a request for "picture2.jpg" arrives at a cache the first time, the cache in the network determines that it does not have a copy of "picture2jpg", and the cache will request a copy from the origin site. To keep in synchronization with the origin site, the caches periodically check the content they have cached against the copy of the content in the origin site."

Swildens discloses the following in column 4, line 62 to column 5, line 16:

> "The present system also uses one or more probes to detect information about certain criteria from the network. There are

> probes including a NetProbes, a ServiceProbe and a LatencyProbe. ServiceProbes test local server resources while LatencyProbes conduct network round trip tests to clients. Each POP in the network is assigned a ServiceProbe and a LatencyProbe – these can be separate machines but in most cases, the same machine will perform both types of probe.
>
> The NetProbes are responsible for providing the traffic management system with service and latency metrics. The metrics are reported to the DNS server and LogServers. FIG. 2 is a simplified diagram 200 of these probes according to embodiments of the present invention. This diagram is merely an example which should not limit the scope of the claims herein. One of ordinary skill in the art would recognize many variations, alternatives, and modifications. The diagram 200 includes a POP 201, which includes a NetProbes server. Service probes monitor the POP servers to test the availability and load of the services they support. The latency probe tests the round trip time between the POP and the DNS servers."

Thus, Swildens redirects the device to connect to a cache. Then the device looks for the content on the cache. If the content is missing on the cache, the cache retrieves the content from the origin system.

In Applicant's claim 5, Applicant will try service provider 1 at a location code. If the above fails, Applicant will try service provider 2 at the same location code.

In view of the above, claims 1-7, 9-15, and 17-24 are patentable. If the Examiner

has any questions, would he please contact the undersigned at the telephone number noted below.

Respectfully submitted,

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